



Steve Adams  
Product Manager

**BINMASTER**  
THE LEVEL CONTROL EXPERTS®

Division of Garner Industries  
4200 North 48th St. / Lincoln, NE 68504-1498  
(402) 434-9102 / FAX (402) 434-9133

**BEST AVAILABLE COPY**



Friday, March 08, 1996

Mr. Frank Costanzo  
JP Donmeyer  
PO Box 74  
Ono, PA 17077

Dear Frank:

It was a pleasure visiting with you yesterday and discussing your unique application. As requested, I have included a partial users list of the Smart Bob System. Once again, these are being operated from same location, however, the only difference would be utilizing a computer modem for separate locations.

Also, as promised I have enclosed four tickets to the upcoming Powder and Bulk Solids Show in Chicago. This show is streamlined for the dry processing industry highlighting every form of equipment available for improved processing.

I look forward to discussing your application further with possible demonstration once your buying intention is nearer. Should you have additional questions, please contact me at 800-278-4241. Thank you for your interest.

Sincerely,

  
Steve Adams  
Product Manager



## Directory

Steve Adams  
BinMaster Level Controls  
4200 North 48th Street  
Lincoln, Nebraska 68504

Page: 1  
Report Date: 3/8/96  
Time: 9:06AM  
Number of Contacts: 7

### Primary

### Secondary

Associated Feeds & Supply  
Jon Lundskoog

Ext: CC:1

Assistant:

Fax:  
5213 W. Main

Turlock  
CA  
95381

Calva Products  
Phil Williams

Ext: CC:1

Assistant:

Fax:  
4351 Wivory Road

Acampo  
CA  
95220

General Mills  
Bob Calton

Ext: CC:1

Assistant:

Fax:

Griffin Industries  
Rob Warren

Ext: CC:1

Assistant:

Fax:  
County Road 400 West

Newbury  
IN  
47449



## Directory

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4200 North 48th Street  
Lincoln, Nebraska 68504

Page: 2  
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### Primary

### Secondary

Hartz Mountain Corp.  
Rob Post

Ext: CC:1

Assistant:

Fax:  
192 Bloomfield Ave.

Bloomfield  
NJ  
07003

KAO Infosystems, Inc.  
Gary Brune  
508-747-5520  
Fax: 508-747-5521  
40 Grissom Rd.

Ext: CC:1

Assistant:

Plymouth  
MA  
02360

Tri-Seal International, Inc.  
Brannin Russell  
914-353-3300  
Fax: 914-353-3376  
217 Bradley Hill Rd.

Ext: CC:1

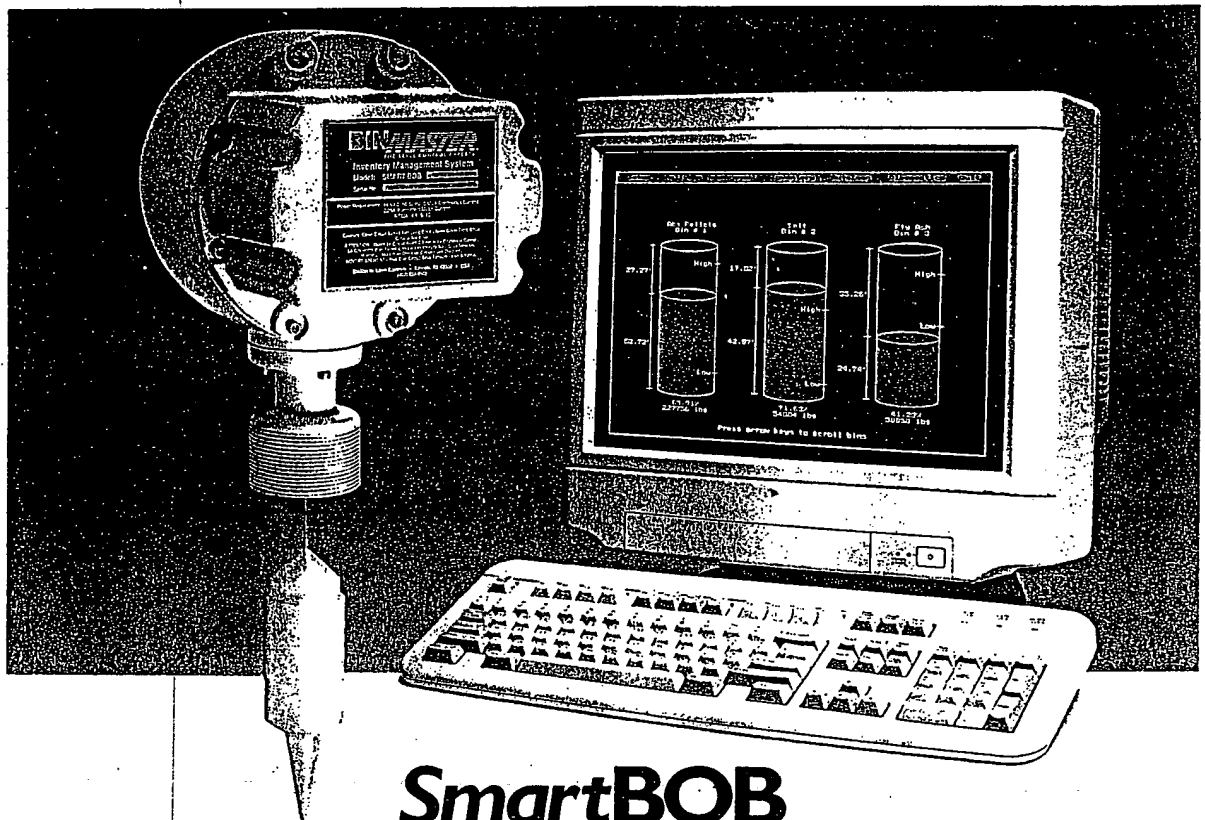
Assistant:

Blaauvelt  
NY  
10913



# BINMASTER<sup>®</sup>

THE LEVEL CONTROL EXPERTS



## SmartBOB<sup>®</sup>

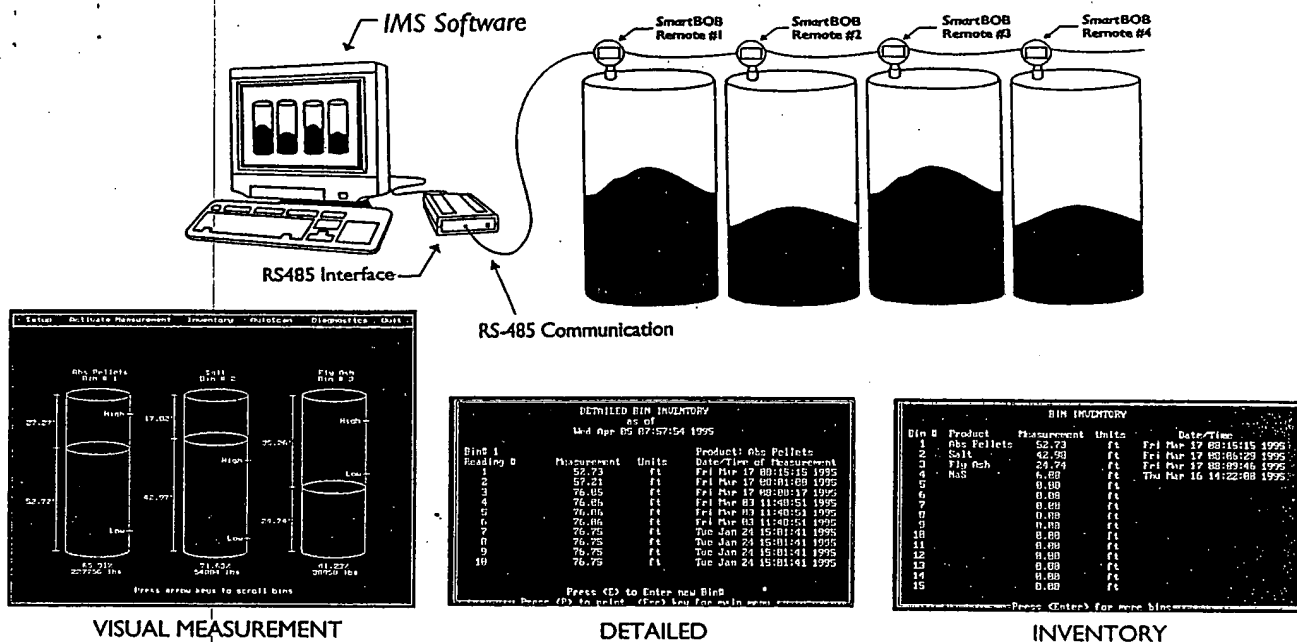
### INVENTORY MANAGEMENT SYSTEM

#### NEW DESIGN PRODUCES ADVANCED, AFFORDABLE LEVEL CONTROL

**SmartBob** IMS is an on-demand level measurement system for solids and liquids. Using microprocessor based Remote Sensing Units and specially designed PC compatible software, BinMaster is the first to design an affordable inventory management system with sophisticated measurement capabilities.

#### REMOTE SENSING UNIT - FAST, ACCURATE AND RELIABLE

**SmartBob Remote** measures material with a high-speed weighted probe that travels at 2.5 feet per second. It provides accurate mechanical measurement to the nearest one-tenth of a foot. The **SmartBob Remote** may be used to measure a variety of materials - chemicals, plastics, cement, coal, pulp, grain - in open or closed vessels up to 150 feet. It's specially designed for reliable operation in humid, dusty and extreme temperature applications. The rugged industrial enclosure meets Class I and Class II specifications (approvals pending).



## IMS SOFTWARE PROVIDES INVENTORY MANAGEMENT CAPABILITIES

**SmartBob** IMS Software runs on an IBM compatible PC and controls up to 30 Remote Sensing Units from one location. The system uses a RS-485 network which requires less wiring and simplifies installation. With user friendly "pull-down" menus, the software provides a graphic representation of material measurements by distances, weight and percentage in English and in metric units. It also provides inventory history, measurement scheduling and high/low alarms. Plus it can interface with a printer to provide hard copy documents of each function.

## SmartBOB SPECIFICATIONS

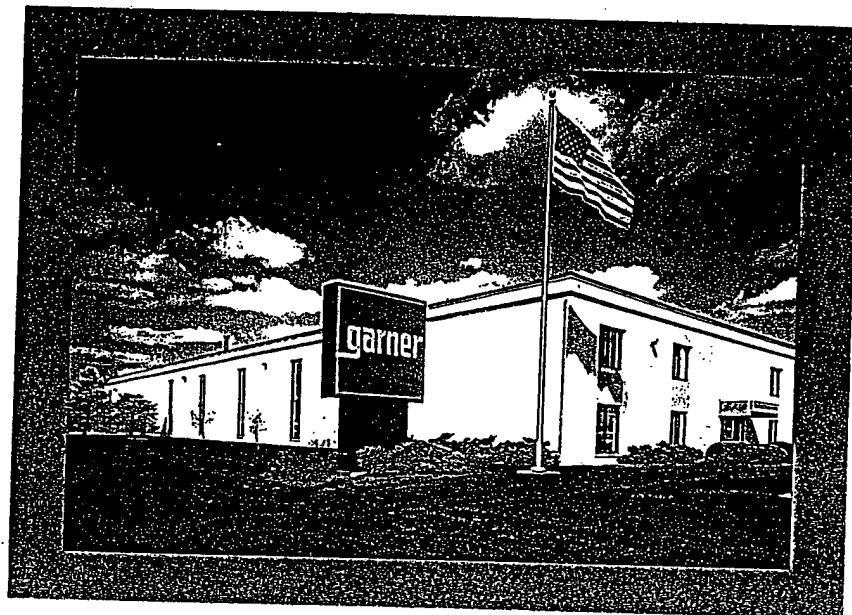
Power Requirements: .....16VAC 50/60Hz  
 Power Consumption: .....2VA Continuous  
 .....36VA Intermittent  
 Current Draw: .....0.125A Continuous  
 .....2.25A Intermittent  
 Operating Temperature: .....32°F to 185°F (0° to 85°C)  
 Operating Temperature with Heater: .....-40°F to +185°F (-40°C to +85°C)  
 Pressure: .....Atmospheric  
 Measurement Range: .....60 ft Standard  
 .....150 ft maximum  
 Measurement Rate: .....2.5 ft/sec (typical)  
 Measurement Accuracy: .....0.1 ft (0.03m)  
 Repeatability: .....0.1 ft (0.03m)  
 Resolution: .....0.15 inch (0.4cm)  
 Communication: .....RS-485 Half Duplex  
 Wiring Distance: .....4000 ft (1220m)  
 Enclosure: .....Type 4X, 5, 7, 9, 12  
 Explosion Proof Class I Group C & D  
 Class II Group E, F, & G (approvals pending)

Mounting: .....8 NPT floor flange  
 Conduit Entry: .....3/4" NPT  
 Weight: .....25 lbs.  
 Diameter: .....9"  
 Height: .....14"  
 Depth: .....9 1/2"  
 Air Purge Entry: .....1/4"-18 NPT  
 Cable: .....316 Stainless Steel  
 .....0.037" diameter  
 Nylon Coated  
 Warranty: .....One Year

**OPTIONS**

Heater: .....25W 40°F  
 Probes: .....Spiked, Float, or Bottle  
 Transformer: .....120VAC/16VAC, 150VA  
 .....120VAC/16VAC, 250VA  
 Interface Cable: .....RS-485 Communication Cable  
 Belden #8102

**BINMASTER**  
 THE LEVEL CONTROL EXPERTS



*For more than thirty years,  
Garner Industries has manu-  
factured the BinMaster  
product line of level controls.*

*Today our commitment continues to provide our customers with the finest products and the best service possible.*

*For further information on BinMaster level control products, and the name of your local distributor, call 1-800-278-4241.*

# BINMASTER

THE LEVEL CONTROL EXPERTS



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THE LEVEL CONTROL EXPERTS

Division of Garner Industries

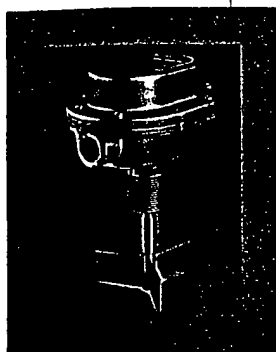
4200 N 48TH STREET

**BINMASTER**  
THE LEVEL CONTROL EXPERTS

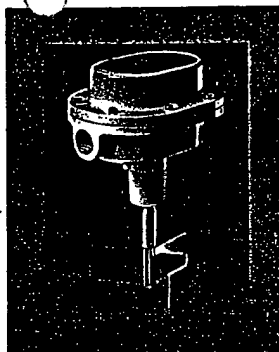
Division of Garner Industries

4200 N 48TH Street

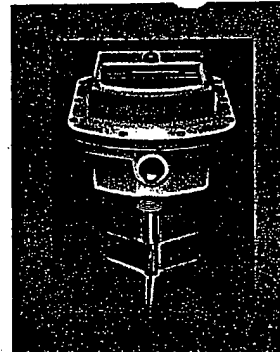
Lincoln NE 68504-9940



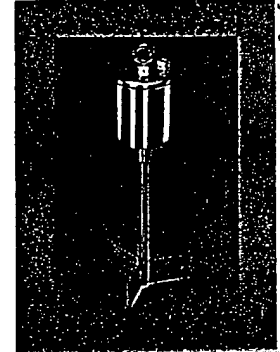
**GR, GRE, GRX**



**GRD, GRDX**



**GRII MAXIMA**



**TILT SWITCH**

**APPLICATIONS**

Reliable point level detection for bulk solids including powder, pellet and granular materials

Use in bins, vessels, chutes and conveyers

Material density from 5 lbs./cu.ft. to over 100 lbs./cu.ft.

Feed, seed, grain, food, sand, gravel, concrete, aggregate, plastic, chemical, coal, and other materials

Reliable point level detection for bulk solids including powder, pellet and granular materials

Use in bins, vessels, chutes and conveyers

Material density from 5 lbs./cu. ft. to over 100 lbs./cu. ft.

Feed, seed, grain, food, sand, gravel, concrete, aggregate, plastic, chemical, coal, and other materials

Reliable point level detection for bulk solids including powder, pellet and granular materials

Use in bins, vessels, chutes and conveyers

Material density from 5 lbs./cu. ft. to over 100 lbs./cu. ft.

Feed, seed, grain, food, sand, gravel, concrete, aggregate, plastic, chemical, coal, and other materials

Reliable high level detection for dense bulk solids

Use in bins, vessels, chutes, silos or over conveyers and open pits where conventional level devices can not be mounted

Material density of 15 lbs./cu. ft. and greater

Grain, sand, gravel, concrete, aggregate, coal, and other materials

**FEATURES**

Rugged construction and simple, dependable design

De-energizing motor for extended operation life

Three bearing drive shaft assembly reduces wear and increases reliability

Various voltages available

Explosion proof model

Terminal strip for quick easy installation

Interchangeable with other rotary units

Fail-Safe circuitry eliminates spills and process shortages from power failures

Rugged construction and simple, dependable design

De-energizing motor for extended operation life

Three bearing drive shaft assembly reduces wear and increases reliability

Multiple voltages

Explosion proof model

Interchangeable with other rotary units

Fail-Safe circuitry eliminates spills and process shortages from power failures, motor or gear failures

Visual LED indicates sensor status: uncovered, covered and fault conditions

Normal and fault status contact

De-energizing motor for extended operation life

Three bearing drive shaft assembly reduces wear and increases reliability

Multiple voltages

Interchangeable with other rotary units

Economical high level point detection

Rugged construction and easy installation

Simple design with one moving part

Switch activated at 15 degrees

Stainless steel paddle options available

**SPECIFICATIONS**

Power Requirements: 120/240 VAC  
Output Contacts: SPDT 15 Amp 120 VAC

Ambient Operating Temperature:  
-40°F to +300°F, (-40°C to +149°C)

Pressure: 1/2 micron, 30 PSI

Approvals & Certifications (available):  
listed for Class I, Groups C & D and  
Class II Groups E, F & G Hazardous  
Locations. Enclosure Type 4, 5, 7, 9  
& 12

Enclosure: Die cast aluminum

Mounting: 1 1/4" NPT

Shaft and components: 316 SS

Power Requirements: 120/240 VAC;  
24/ 12 VDC

Output Relay: DPDT 10 Amp 250 VAC

Ambient Operating Temperature:  
Electronics, -40°F to +185°F,  
(-40°C to +85°C)

Pressure: 1/2 Micron, 30 PSI

Approvals & Certifications (available):  
listed for Class I, Groups C & D and  
Class II Groups E, F, & G Hazardous  
Locations. Enclosure Type 4X, 5, 7, 9  
& 12

Enclosure: Die cast aluminum, USDA  
Approved powder coat finish

Mounting: 1 1/4" NPT

Shaft and components: 316 SS

Power Requirements: 24/120/240 VAC

Output Relay: DPDT 10 Amp 250 VAC;  
SPDT supervisory 10 Amp 250 VAC  
normal, fault

Ambient Operating Temperature:  
Electronics, -40°F to +185°F,  
(-40°C to +85°C)

Pressure: 1/2 Micron, 30 PSI

Approvals & Certifications (available):  
listed for Class II, Groups E, F, & G  
Hazardous Locations. Enclosure Type  
4X, 5, 9 & 12

Enclosure: Die cast aluminum, USDA  
Approved powder coat finish

Mounting: 1 1/4" NPT

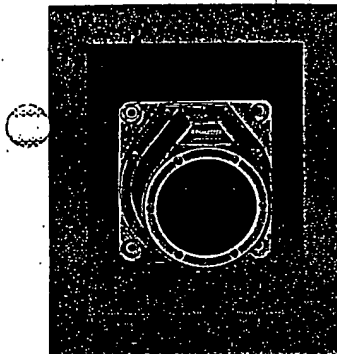
Shaft and components: 316 SS

Switch Ratings: 15 Amps @125, 250  
or 480 VAC, 1/8 HP @ 125 VAC,  
1/4 HP @ 250 VAC, 1/2 A @ 125  
VDC, 1/4 A @ 250 VDC

Operating Temperature: -40°F to  
+300°F, (-40°C to +149°C)

Housing: Die cast aluminum

Mounting: Suspended by flexible  
hanger



**BM-45, BM-65**

Reliable point level detection for free flowing dry materials

Use in bins, vessels, and some plugged chute applications

Material density from 20 lbs./cu. ft. to 60 lbs./cu. ft.

Feed, seed, grain, food, rubber, plastics, light powders, granules and other materials

Rugged construction and simple design, very economical point level detection

Neoprene or silicone diaphragm material, variable sensitivity

Internal or external mount

Multiple voltages

Explosion proof

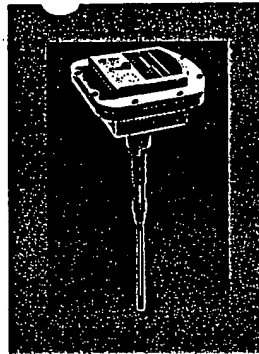
Switch Ratings: 15 Amps @ 125, 250 or 480 VAC, 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 1/2 A @ 125 VDC, 1/4 A @ 250 VDC

Operating Temperature: -40°F to +300°F, (-40°C to +149°C)

Approvals & Certifications (available): listed for Class II, Groups E, F, & G

Housing Enclosure: Die cast aluminum

Mounting: Internal or External, 16 ga. galvanized mounting plate



**PRO I**

Point level detection and process control for solid, liquid and slurry materials

Use in bins, vessels, tanks, chutes and conveyers

Material density over 10 lbs./cu. ft.

Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain and many more materials

"Quick-Set" simple calibration, adjustable 1-10 Picofarads

PRO-Shield compensates for material build-up on probe, sticky and corrosive applications

Fail-Safe, switch selectable high/low

Adjustable time delay to 10 seconds

Optional sensing probes: coated, food grade, flush mount, solid and flexible extension

Visual LED indicates sensor status: uncovered, covered, and power failure

Power Requirements: 120/240 VAC, 50/60 Hz ±15%

Output Relay: DP/DT 10 Amp at 250 VAC

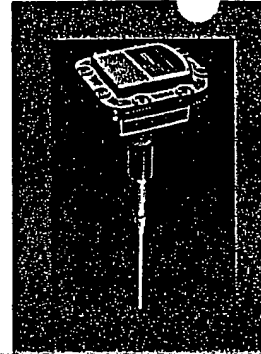
Ambient Operating Temperature: Electronics, -40°F to +185°F, (-40°C to +85°C)

Pressure: 500 PSI

Approvals & Certifications (available): Enclosure Type 4X, 5, & 12

Housing Enclosure: Cast aluminum enclosure with bolt-on cover and USDA approved finish

Mounting: 1 1/4" NPT Standard; 3/4" NPT 316 SS Optional



**PRO X**

Point level detection and process control for solid, liquid and slurry materials

Use in bins, vessels, tanks, chutes and conveyers where explosion rated sensor is necessary

Material density over 10 lbs./cu. ft.

Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain and many more materials

"Quick-Set" simple calibration, adjustable 1-10 Picofarads

PRO-Shield compensates for material build-up on probe, sticky and corrosive applications

Fail-Safe, switch selectable high/low

Adjustable time delay to 10 seconds

Optional sensing probes: coated, flush mount flexible extension

Internal LED indicates material in contact with probe

Power Requirements: 120/240 VAC, 50/60 Hz ±15%

Output Relay: DP/DT 10 Amp at 250 VAC

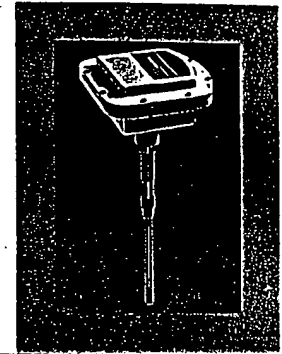
Ambient Operating Temperature: Electronics, -40°F to +185°F, (-40°C to +85°C)

Pressure: 500 PSI

Approvals & Certifications (available): Enclosure Type 4X, 5, 7, 9 & 12; Explosion Proof for Class I Group C & D; Class II E, F, & G

Housing Enclosure: Cast aluminum enclosure with bolt-on cover and USDA approved finish

Mounting: 1 1/4" NPT Standard; 3/4" NPT 316 SS Optional



**PRO II**

Point level detection and process control for solid, liquid and slurry materials

Use in bins, vessels, tanks, chutes and conveyers where flush mount sensor is necessary

Material density over 10 lbs./cu. ft.

Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain and many more materials

"Quick-Set" simple calibration, adjustable 1-10 Picofarads

PRO-Shield compensates for material build-up on probe, sticky and corrosive applications

Fail-Safe, switch selectable high/low

Adjustable time delay to 10 seconds

Optional sensing probes: coated, food grade, flush mount, solid and flexible extension

Internal LED indicates material in contact with probe

Power Requirements: 120/240 VAC, 50/60 Hz ±15%

Output Relay: DP/DT 10 Amp at 250

Ambient Operating Temperature: Electronics, -40°F to +185°F, (-40°C to +85°C)

Pressure: 500 PSI

Approvals & Certifications (available): Enclosure Type 4X, 5, & 12

Housing Enclosure: Cast aluminum enclosure with bolt-on cover and US approved finish

Mounting: 1 1/4" NPT Standard; 3/4" NPT 316 SS Optional

## PRO REMOTE

## BINBOB

## SYNABOB

## AINMADO

Point level detection and process control for solid, liquid and slurry materials

Use in bins, vessels, tanks, chutes and conveyors with high temperature/high vibration conditions; electronics may be located up to 75' from sensing probe

Material density over 10 lbs./cu. ft.

Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain and many more materials

Continuous "on-demand" level measurement for solid, liquid and slurry materials. Operates using electro-mechanically controlled sensing probe

Indoor and outdoor applications in vessels, and tanks measuring up to 150'

Material density over 5 lbs./cu. ft., not affected by dust or vapor

Plastics; chemicals; coal; concrete; food ingredients; pharmaceuticals; feed/grain; aggregates and many more materials

Continuous "on-demand" level measurement and Inventory Management System (IMS) for solid, liquid and slurry materials. Microprocessor based, electro-mechanical level measurement device

IBM compatible, PC based IMS software controls up to 30 remote sensing units and provides graphical display of material measurements and inventory history by distance, weight, and percentage in English and metric units. Wiring distance up to 4,000 ft.

Plastics, chemicals, coal, concrete, food ingredients, pharmaceuticals, feed/grain, aggregates and many more materials

Eliminate packing and maintain flowability of finely-ground dry bulk materials

Indoor and outdoor applications in bins, and storage vessels

Use in high temperature, corrosive applications

Flour, seeds, grain, flakes, sawdust, cement, PVC resin, fly ash, carbon black, lime, sand, cornstarch, gypsum, sugar and other materials

"Quick-Set" simple calibration, adjustable 1-10 Picolamps

PRO-Shield compensates for material build-up on probe, sticky and corrosive applications

Fail-Safe, switch selectable high/low

Adjustable time delay to 10 seconds

Optional sensing probes: coated, flush mount

Internal LED indicates material in contact with probe

Remote Probe status contacts

Fast, accurate measurement without calibration

Simple operation with advanced digital circuitry

Rugged mechanical construction; optional sensing probes

Console option, monitor up to 12 remote sensors, programmable bin height, LED readout

PLC interface option for direct operation of remote sensors without console

High speed, accurate measurement without calibration, nylon coated stainless steel cable

Advanced design with built-in measurement reliability for one or many vessels

Rugged mechanical construction; optional sensing probes

Explosion-proof rating

RS 485 Protocol available for direct PLC integration

Special design provides two action flow aid through aeration and vibration

Requires fewer parts than diffuser type because of unique design

Uses high or low pressure

Not affected by moisture or temperature

Self-cleaning

Simple to install in any type vessel

Suitable for abrasive material

Power Requirements: 120/240 VAC, 50/60 Hz  $\pm 15\%$

Output Relay: DP/DT 10 Amp at 250 VAC

Status Contacts: 3 Amps 240 VAC

Ambient Operating Temperature: Electronics,  $-40^{\circ}\text{F}$  to  $+185^{\circ}\text{F}$ ; ( $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )

Pressure: 500 PSI

Approvals & Certifications (available): Intrinsically safe, Enclosure Type 4X, 5, & 12

Housing Enclosure: Cast aluminum enclosure with bolt-on cover and USDA approved finish

Mounting: 1 1/4" NPT Standard; 3/4" NPT 316 SS Optional

Power Requirements: 120 VAC, 50/60 Hz

Ambient Operating Temperature: Electronics,  $-40^{\circ}\text{F}$  to  $+185^{\circ}\text{F}$ ; ( $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ ), Optional heater for below  $-30^{\circ}\text{F}$

Measurement Range: 150'

Measurement Rate: 1' per second

Resolution: .1 ft.

Enclosure: Cast aluminum frame and weather tight polyethylene cover

Mounting: 3" NPT stand pipe and aluminum flange

Power Requirements: 16 VAC 50/60 Hz

Ambient Operating Temperature: Electronics with Heater:  $-40^{\circ}\text{F}$  to  $+185^{\circ}\text{F}$ ; ( $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ )

Measurement Range: 150'

Measurement Rate: 2.5' per second

Accuracy: 0.25%

Mounting: 3" - 8 NPT

Enclosure: Die cast aluminum

Approvals & Certifications (available): Enclosure Type 4X, 5, 7, 9, 12, Explosion Proof Class I Group C & D, Class II Group E, F & G

Durable molded silicone rubber construction

Stainless Steel Center Shaft

Rated to 250°F (121°C)

Air pressure from 5 PSIG to 60 PSIG

Food grade material available

## Order Information

To place an order or for technical assistance, please call  
**1-402-434-9102 Or 1-800-278-4241**

Or FAX

**1-402-434-9133**

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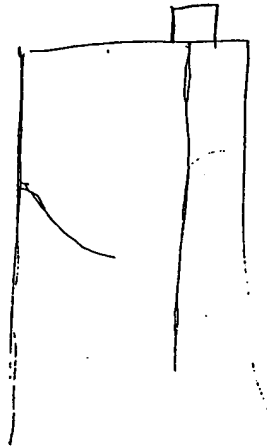
**BINMASTER**  
THE LEVEL CONTROL EXPERTS

Division of Garner Industries  
4200 N 48TH STREET  
LINCOLN NE 68504-9940

Title: \_\_\_\_\_  
Company: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ Zip: \_\_\_\_\_  
State: \_\_\_\_\_  
Phone: \_\_\_\_\_  
FAX: \_\_\_\_\_

**Mail Today or Fax to:**  
**(402) 434-9133**

12



**BINMASTER**  
THE LEVEL CONTROL EXPERTS

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